REMARKS/ARGUMENTS

The Applicants thank the Examiner for performing a thorough search and identifying all of the relevant art. Claims 1-33 remain pending in the application.

CLAIM REJECTIONS—35 U.S.C. § 101

Claims 1-33 were rejected under 35 U.S.C. § 101. The Office Action alleged that the methods recited in these claims failed to produce any useful, tangible, and concrete result. The rejection is traversed for the reasons set forth below.

In accordance with one embodiment of the present invention, there is provided a mechanism for allowing an application to perform specified operations at the time of an occurrence of a specified event relative to a specified Smart Card-accessing device, even though the specified event may occur at any time during the application's execution. This is very useful.

Additionally, in accordance with one embodiment of the present invention, there is provided a mechanism for preventing a user of a user session from causing an application to access a Smart Card-accessing device that is not associated with that user session. This is very useful.

As a result, the application does not need to be programmed to poll the specified Smart Card-accessing device at specific times during the application's execution. The mechanism will execute the specified function in response to an occurrence of an event of the specified type regardless of the time at which the event occurs during the application's execution. This eliminates the possibility that an occurrence of the event will be missed while the application is busy performing other tasks, and simplifies the application code, making the application programmer's job easier. This is very useful.

As another result, the application can be programmed to respond to events that pertain to Smart Card-accessing devices as entities separate from Smart Cards. Therefore, an application can be programmed to respond to an event that occurs relative to a specified Smart Card-accessing device regardless of whether a Smart Card is present in the Smart Card-accessing device, and regardless of which Smart Card is present in the Smart-Card accessing device. This broadens the application's functionality. This is very useful.

Furthermore, in one embodiment, to prevent a user session from causing an application to access a Smart Card-accessing device that is not associated with that user session, the server computer associates each separate user session with a separate Smart Card-accessing device. In response to receiving a request to perform an operation relative to a particular Smart Card-accessing device, the server computer determines whether the particular user session in which the request was received is associated with the particular Smart Card-accessing device. If the server computer determines that the particular user session is not associated with the particular Smart Card-accessing device, then the server computer does not allow the operation to be performed. As a result, a user of one Smart Card-accessing device is prevented from reading information from or writing information to Smart Cards that are present in other Smart Card-accessing devices, which may contain other users' Smart Cards. This is very useful.

Each of the methods recited in Claims 1-33 is useful for various reasons, several of which are discussed above.

Claims 1, 7, 15, and 21 each involve starting a mechanism (e.g., a thread or process) under certain specified conditions. To determine whether such a mechanism has been started, a user can simply command his computer to show the currently executing mechanisms, and see whether the started mechanism is among them. Thus, the results of these methods are detectable by a person, and, therefore, tangible.

Claims 27, 29, and 31 each involve causing a mechanism (e.g., a thread or process) to start waiting in response to one condition, and to stop waiting in response to another condition. Sometimes, it can be useful to cause a mechanism to wait so that the mechanism does not monopolize the processing resources of the device on which it executes, thereby allowing other mechanisms to utilize the processing resources. To determine whether such a mechanism is waiting, a user can simply command his computer to show the currently executing mechanisms. The user can tell, at least by the number of cycles that each mechanism is currently using, whether the mechanism is currently waiting. Additionally, the effects of one mechanism waiting will be evident in the system via the acceleration of other mechanisms that are vying for the same processing resources. Thus, the results of these methods are detectable by a person, and, therefore, are tangible.

As a result of the method of Claim 33, an operation will either be performed or prevented relative to a Smart-Card accessing device. This is very useful for security reasons; one would not want one user to be able to access another user's Smart Card. Whether or not the operation has been performed or prevented will be apparent to the user. For example, the user can examine the contents of the Smart Card to determine whether the operation was performed relative to the Smart Card. Therefore, the results of this method are detectable be a person, and, therefore, are tangible.

Each of the methods recited in Claims 1-33 can be performed again and again. If these methods are performed under the same sets of circumstances, then these methods will always produce the same results. The methods are deterministic in nature. No uncertainty is involved in what result these methods will return under a known set of circumstances. Because these results obtained from these methods can be obtained in a repeatable manner, these methods are concrete. Additionally, these methods involve interaction with real-world objects such as Smart Cards and Smart Card-accessing devices. Thus, the methods involve interaction with concrete components rather than mere abstract ideas.

CLAIM REJECTIONS—35 U.S.C. § 102

Claims 1-33 were rejected under 35 U.S.C. § 102(e) as being allegedly anticipated by U.S. Patent No. 2003/0191713 ("Yap"). This rejection is respectfully traversed.

Among other features, Claim 1 recites, "detecting a first invocation of the first method by the application, wherein the first invocation specifies a first Smart Card-accessing device, a first type of event, and a first function." For example, paragraph [0030] of the present application discloses:

> According to one embodiment, API methods 108 comprise an "addEventListener" method. **The invocation of the "addEventListener" method specifies, as parameters of the method, one of Smart Card-accessing devices 104A-N, a type of event, and a function**. For example, the function may be specified as a pointer to a particular function. In one embodiment, the types of events include a "device reset" event, a "card inserted" event, a "card removed" event, a "device closed" event, a "communication error" event, a "card present" event, and a "card absent" event. One or more types of events may be specified in a single invocation of the "addEventListener" method.

Yap does not disclose any such method. Yap does not disclose any method whose invocation specifies each of: (a) a Smart Card-accessing device, (b) a type of event, and (c) a function.

The Office Action apparently analogizes the "first method" of Claim 1 to application 304 shown in Yap's FIG. 8. However, an application is not a method. An application is a program.

An application may include a method, and an application may invoke a method. However, an application is not a method.

Even assuming that Yap's application 304 were a method, Yap does not disclose, teach, or suggest that an invocation of application 304 (the alleged "method") specifies each of: (a) a Smart Card-accessing device, (b) a type of event, and (c) a function.

Additionally, if Yap's application 304 is supposed to be the "method" of Claim 1, then there cannot be anything in Yap that corresponds to the "application" of Claim 1 that invokes the "method" of Claim 1. Yap's application 304 cannot be the "method" of Claim 1, because Yap does not disclose any "application" that "invokes" application 304.

Additionally, Claim 1 recites, "starting a first mechanism that executes the first function each time that the first Smart Card-accessing device receives a reset command." The Office Action apparently analogizes the "first mechanism" of Claim 1 to Yap's launcher 303. However, Yap does not disclose, teach, or suggest that launcher 303 executes a function each time that a Smart Card-accessing device receives a reset command.

Claim 1 requires that the function that the first mechanism executes must be the same function that was specified in the invocation of the method. Even if Yap's launcher 303 executed a function each time that a Smart Card-accessing device received a reset command, Yap still does not disclose, teach, or suggest that such a function is a function that was specified in the invocation of a method.

Thus, there are multiple aspects of Claim 1 that Yap fails to disclose, teach, or suggest. Even if Yap discloses all of the components that are recited in Claim 1 (and the Applicants do not concede that Yap actually does), Yap still cannot anticipate Claim 1 unless Yap also discloses that these components interact with each other in the same manner as that disclosed in Claim 1.

For at least the above reasons, the Applicants respectfully submit that Claim 1 is patentable over Yap under 35 U.S.C. § 102(e).

Like Claim 1, each of Claims 7, 15, and 21 also recites, among other features, "detecting a first invocation of the first method by the application, wherein the first invocation specifies a first Smart Card-accessing device, a first type of event, and a first function." As is discussed above in connection with Claim 1, Yap does not disclose a method invocation that each of: (a) a Smart Card-accessing device, (b) a type of event, and (c) a function. Therefore, the Applicants respectfully submit that Claims 7, 15, and 21 are also patentable over Yap under 35 U.S.C. § 102(e).

By virtue of the dependence of Claims 2-6 from Claim 1, the Applicants respectfully submit that Claims 2-6 are patentable over Yap under 35 U.S.C. § 102(e) for at least the reasons discussed above in connection with Claim 1. By virtue of the dependence of Claims 8-14 from Claim 7, the Applicants respectfully submit that Claims 8-14 are patentable over Yap under 35 U.S.C. § 102(e) for at least the reasons discussed above in connection with Claim 7. By virtue of the dependence of Claims 16-20 from Claim 15, the Applicants respectfully submit that Claims 16-20 are patentable over Yap under 35 U.S.C. § 102(e) for at least the reasons discussed above in connection with Claim 15. By virtue of the dependence of Claims 22-26 from Claim 21, the Applicants respectfully submit that Claims 22-26 are patentable over Yap under 35 U.S.C. § 102(e) for at least the reasons discussed above in connection with Claim 22.

Claim 27 recites, among other features, "in response to detecting the invocation of the method, causing a mechanism to begin waiting." The Office Action rejected Claim 27 for the same reasons as Claims 1-15 and 21. However, none of Claims 1-15 or 21 recites anything about causing a mechanism to begin waiting.

Claim 27 also recites "in response to detecting that a Smart Card is present in the Smart Card-accessing device, causing the mechanism to stop waiting." Yap does not disclose, teach, or suggest causing a mechanism to stop waiting in response to detecting that a Smart Card is present in the Smart Card-accessing device. Even if Yap disclosed such a feature (and the Applicants do not concede that Yap does), Yap still does not disclose, teach, or suggest that the Smart Card-accessing device in whose presence the Smart Card is detected is the same Smart Card-accessing device that is specified in a method invocation. Yap does not disclose, teach, or suggest a method invocation that specifies a Smart Card-accessing device. For at least the above reasons, the Applicants respectfully submit that Claim 27 is patentable over Yap under 35 U.S.C. § 102(e).

Claim 29 recites, among other features, "in response to detecting that no Smart Card is present in the Smart Card-accessing device, causing the mechanism to stop waiting." Yap does not disclose, teach, or suggest causing a mechanism to stop waiting in response to detecting that no Smart Card is present in the Smart Card-accessing device. Even if Yap disclosed such a feature (and the Applicants do not concede that Yap does), Yap still does not disclose, teach, or suggest that the Smart Card-accessing device in whose presence no Smart Card is detected is the same Smart Card-accessing device that is specified in a method invocation. Yap does not disclose, teach, or suggest a method invocation that specifies a Smart Card-accessing device. For at least the above reasons, the Applicants respectfully submit that Claim 29 is patentable over Yap under 35 U.S.C. § 102(e).

Claim 31 recites, among other features, "in response to detecting the invocation of the method, causing a mechanism to begin waiting." The Office Action rejected Claim 31 for the same reasons as Claims 1-15 and 21. However, none of Claims 1-15 or 21 recites anything about causing a mechanism to begin waiting.

Claim 31 also recites "in response to detecting that the Smart Card is not present in the Smart Card-accessing device, causing the mechanism to stop waiting." Yap does not disclose, teach, or suggest causing a mechanism to stop waiting in response to detecting that a Smart Card is present in the Smart Card-accessing device. Even if Yap disclosed such a feature (and the Applicants do not concede that Yap does), Yap still does not disclose, teach, or suggest that the Smart Card whose absence from the Smart Card-accessing device is detected is the same Smart Card that is specified in a method invocation. Yap does not disclose, teach, or suggest a method invocation that specifies a Smart Card. For at least the above reasons, the Applicants respectfully submit that Claim 31 is patentable over Yap under 35 U.S.C. § 102(e).

Claim 33 recites, among other features, "if the particular user session is associated with the particular Smart Card-accessing device, then performing the operation relative to the Smart Card-accessing device; and if the particular user session is not associated with the particular Smart Card-accessing device, then preventing the operation relative to the Smart Card-accessing device." The Office Action rejected Claim 33 for the same reasons as Claims 1-15 and 21. However, none of Claims 1-15 or 21 recites anything about performing or preventing an operation relative to a Smart Card-accessing device based on whether a particular user session is associated with that Smart Card-accessing device as required by Claim 33. Indeed, Yap does not disclose, teach, or suggest performing or preventing an operation relative to a Smart Card-accessing device based on whether a particular user session is associated with that Smart Card-accessing device. For at least the above reasons, the Applicants respectfully submit that Claim 33 is patentable over Yap under 35 U.S.C. § 102(e).

By virtue of the dependence of Claim 28 from Claim 27, the Applicants respectfully submit that Claim 28 is patentable over Yap under 35 U.S.C. § 102(e) for at least the reasons discussed above in connection with Claim 27. By virtue of the dependence of Claim 30 from

Claim 29, the Applicants respectfully submit that Claim 30 is patentable over Yap under 35 U.S.C. § 102(e) for at least the reasons discussed above in connection with Claim 29. By virtue of the dependence of Claim 32 from Claim 31, the Applicants respectfully submit that Claim 32 is patentable over Yap under 35 U.S.C. § 102(e) for at least the reasons discussed above in connection with Claim 31.

CONCLUSION

For the reasons set forth above, it is respectfully submitted that all of the pending claims are in condition for allowance. Therefore, the issuance of a formal Notice of Allowance is believed next in order, and that action is most earnestly solicited.

The Examiner is respectfully requested to contact the undersigned by telephone if it is believed that such contact would further the examination of the present application.

Please charge any shortages or credit any overages to Deposit Account No. 50-1302.

Respectfully submitted,

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